

### REMARKS

In the specification, the paragraphs beginning at page 1, line 1 and page 23, line 19 has been amended to correct the priority claims and to insert information about the deposit of nucleotide sequences.

Claims 24-26, 29, 30, 33, 35, 36, 38, 39, 41, and 42, to the extent that they are drawn to a polynucleotide encoding amino acids 299-396 of Figure 2, remain pending in the application. Claims 1-23, 27, 28, 31, 32, 37, 40, and 43-49 have been cancelled. Claims 24-26, 29, 30, 33, 35, 36, and 41 have been amended. In light of the Examiner's restriction requirement, Applicants reserve the right to pursue the subject matter of all cancelled claims in one or more divisional applications.

### OBJECTION TO THE SPECIFICATION

The Examiner has objected to the paragraphs containing continuing data. Applicants request that the paragraph(s) added by preliminary amendment be deleted or disregarded and that the first paragraph of the specification as filed be amended as set forth above to provide the correct history of the application.

### CLAIM OBJECTIONS

The Examiner has objected to claim 33, and claims 36, 39, and 42, which depend from claim 33, under 37 C.F.R. § 1.75(c) as being of improper dependent form. Applicants have amended claim 33 so that it no longer refers to any prior claim. Therefore, claim 33, and the claims depending from it, are not in improper dependent form. Applicants request that the Examiner withdraw this objection.

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**REJECTIONS UNDER 35 U.S.C. § 112**

The Examiner rejected claim 41 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner requests that Applicant provide evidence of public availability of the claimed nucleic acid molecule ATCC deposits 40345 and 40342. Applicants submit a Declaration and a copy of the deposit papers stating that these nucleic acid molecules have been deposited under the Budapest Treaty and that ATCC deposits 40345 and 40342 will be released to the public upon issuance of a patent. In light of this Declaration, Applicants request that this rejection be withdrawn.

The Examiner also requests that Applicant amend the specification to include the appropriate information about the nucleotide deposits. As indicated above, this information has been inserted into the specification in the paragraph beginning at page 23, line 19.

The Examiner rejected claims 33, 36, 39, and 42 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement and under 35 U.S.C. § 112, second paragraph, for alleged indefiniteness. The Examiner contends that the claims do not require that the encoded polypeptide possess any particular biological activity. Applicants have amended claim 33 to recite that the DNA sequence encodes a protein capable of inducing bone and/or cartilage formation. This amendment supplies the appropriate identifying characteristics of the claimed genus.

The Examiner also contends that the compositions of claims 33, as well as dependent claims 36, 39, and 42, are not adequately described in the specification. Specifically, the Examiner states that "only isolated polynucleotides encoding

polypeptides comprising the amino acid sequence set for the in SEQ ID NO:4, but not the full breath of the claim meets the written description requirement." Applicants disagree.

Page 8, lines 3-9 of the specification describes, as encompassed by the invention, sequences that hybridize to the sequence of Figure 2 under stringent conditions – as defined by T. Maniatis et al., Molecular Cloning (A Laboratory Manual), Cold Spring Harbor Laboratory (1982). At page 22, line 23-page 24, line 28, the specification provides a detailed description of the identification and isolation of DNA sequences that hybridize to the sequence of Figure 2 under stringent hybridization conditions. Specific conditions are set forth at page 23, lines 25-27 of the specification, and, as noted above, are further defined in Maniatis' Manual of Molecular Cloning. Consequently, the compositions of claim 33, as well as those of dependent claims 36, 39, and 42, are adequately described to those of ordinary skill in the art. Applicants respectfully request that the Examiner withdraw this rejection under 35 U.S.C. § 112, first paragraph.

The Examiner has further rejected claims 33, 36, 39, and 42 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. Specifically, the Examiner contends that the specification fails to precisely define "stringent conditions." Applicants traverse.

As set forth above, stringent hybridization conditions are precisely defined in the specification at page 23, lines 25-27. These conditions are recited as incubation at 65° in standard hybridization buffer and washing at 65° in 0.2X SSC, 0.1% SDS. As further noted above, Maniatis' Manual of Molecular Cloning is also referenced by the

specification (at page 8, lines 3-9) as providing a detailed description of stringent hybridization conditions. Therefore, the term "stringent conditions" does not render claims 33, 36, 39, and 42 indefinite. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection under 35 U.S.C. § 112, second paragraph.

### **DOUBLE PATENTING REJECTIONS**

The Examiner has rejected claims 24-26, 29, 30, 33, 35, 36, 38, 39, 41, and 42 under the judicially created doctrine of obviousness-type double patenting as allegedly obvious over claims 1-7 of U.S. Patent No. 5,013,649.

Filed concurrently with this Reply is a Terminal Disclaimer by Applicants' Assignee under 37 C.F.R. §1.321(c) indicating that the '649 patent and the instant application are commonly owned. Applicants respectfully request that, in view of this Terminal Disclaimer, the rejection of the claims as unpatentable over the '647 patent be withdrawn.

### **CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

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Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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**Attachments:** Declaration under 37 C.F.R. § 1.801-1.809;  
Terminal Disclaimer

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